

Research Symposium

Dairy Emissions: Recent, Ongoing, and Future Research in California

A Technical Discussion

October 11, 2006

Buehler Visitor Center, AGR Room
University of California, Davis
Davis, California



Hosted by:
University of California, Davis
Agricultural Air Emission Center
Department of Animal Science

Symposium Overview

The primary goal of this technical symposium is to provide a forum for researchers to present their latest findings related to dairy emissions to the air. There will also be a panel to discuss immediate and future dairy research needs from the regulatory, academic, dairy industry, and public interest perspectives. Time will also be available for those attending to provide input regarding research priorities.

The symposium will be held on October 11, 2006, at the University of California at Davis, in the Buehler Visitor Center, AGR Room. A map is included. The symposium is scheduled to run from 9:00 a.m. to 3:00 p.m.

The public is welcome to attend and no registration or fees are required. However, we request that everyone attending RSVP, as space is limited. To RSVP, please contact Marie Kavan at mkavan@arb.ca.gov, or (916) 322-7142 by October 6, 2006. If emailing, please include the Subject: Dairy Symposium, and include your name and affiliation in the email.

Background – Dairy Emissions

Over the past several years, substantial efforts have been undertaken to understand the nature of air emissions from dairies and what can be done to reduce them. Several of the key milestones include:

- The passage of Senate Bill 700,
- Definition of Large Confined Animal Facilities (CAFs) by ARB,
- The creation of the Dairy Permitting Advisory Group (DPAG) whose work led to the adoption of an updated dairy emissions factor and recommendations towards determining Best Available Control Technology (BACT) for dairies,
- Publication of a report by the ad-hoc Dairy Manure Technology Feasibility Panel to assess dairy emission reduction technologies,
- Funding and completion of dairy emissions research to answer key questions about the sources and types of dairy emissions,
- Adoption of rules by local air pollution control districts requiring Large CAFs to implement emission mitigation plans,
- The Climate Action Team recommendation to reduce greenhouse gas emissions from manure management activities by 2020,
- Upcoming ozone and PM_{2.5} State Implementation Plans.

This symposium will provide a forum to discuss some of the latest findings and help identify future research priorities.

Dairy Emissions Research Symposium

October 11, 2006

9:00 a.m. to 3:00 p.m.

Buehler Visitor Center (see attached map)

University of California, Davis

PROGRAM

9:00 – 9:15 Opening Remarks UCD & ARB

Research Projects

9:15 – 9:45 **Dairy VOCs Measured in an Environmental Chamber and Other Projects**
Dr. Frank Mitloehner, UC Davis

9:45 – 10:15 **Dairy Manure Microbiology and Emissions**
Dr. Jeff McGarvey, USDA-ARS

10:15 – 10:30 BREAK

10:30 – 11:00 **Dairy Emission Measurements Using Surface Isolation Flux Chambers**
Dr. Chuck Schmidt, Consultant

11:00 – 11:30 **Comparing Baseline Dairies with Dairies Using Potential Mitigation Practices**
Dr. Charles Krauter, CSU Fresno

11:30 – 12:00 **Modeling of Dairy Nutrients and Greenhouse Gases**
Dr. Bill Salas, Applied Geosolutions

12:00 – 1:15 LUNCH (provided with RSVP)

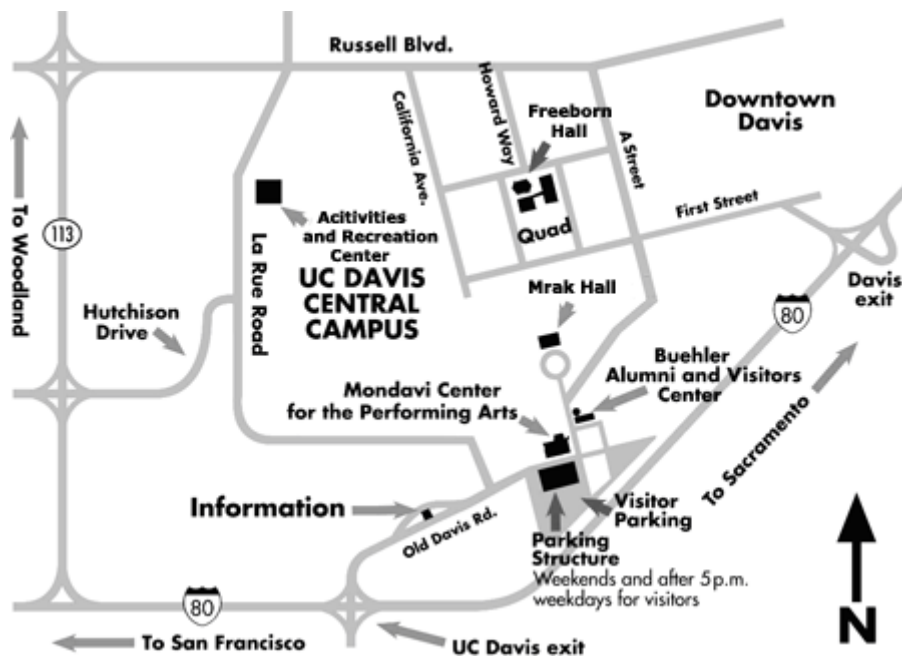
1:15 – 1:45 **Developing a Dairy VOC Emissions Model**
Dr. Ruihong Zhang, UC Davis

Panel Discussion

1:45 – 2:45 **Dairy Research Priorities and Coordination**
- Government Agencies
- Dairy Industry
- Academia and Researchers
- Public Interest
- Audience

2:45 – 3:00 Closing Remarks and Adjourn

Directions to the University of California, Davis
Buehler Alumni & Visitors Center
Davis, CA 95616



From **San Francisco**: Take Interstate 80 East. Exit at UC Davis. Turn left onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From **Sacramento**: Take Interstate 80 West. Exit at UC Davis. Turn right onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From **Sacramento Airport**: Take Interstate 5 South towards Sacramento to Interstate 80 West towards San Francisco. Exit UC Davis. Turn right onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

From **Woodland**: Take Highway 113 South to Interstate 80 towards Sacramento. Exit at UC Davis. Turn left onto Old Davis Road. Pass the South Gate Information Kiosk, continue straight to go to the Alumni Center Building, or turn right to go the parking lot. Go past the Mondavi Center to reach the Walter A. Buehler Alumni and Visitors Center.

The easternmost, triangular portion of the parking lot provides the quickest access to the Alumni & Visitors Center.

Effective July 1, 2003 visitor parking is \$6.00 per day.